Group ID: A
User ID: Etcampb

Page 1 KS: 5,802

Warning [US Reference: Page:1 Posn:1 ] has an issue date that does not match the patent number Warning [US Reference: Page:3 Posn:7] has an issue date that does not match the patent number Warning [US Reference: Page:3 Posn:22] has an issue date that does not match the patent number Warning [Pages Of US References:] page 4 has no references page 5 has no references page 6 has no references Warning [Pages Of Foreign References:] page 1 has no references page 4 has no references page 5 has no references page 6 has no references Warning [Pages Of Other References:] page 1 has no references

page 2 has no references
page 3 has no references

Pat. No. 05455559 - 4

Issue Date: 07/23/01

Group ID: A

Page 1 User ID: Etcampb

CHECK LIST

Rule 47 Continuing Data PCT Disclaimer

No Yes

No

No

Microfiche Appendix

CPA tag

No

No

Foreign Priority Claimed: No

Acknowledged: No

State Code: MO

Country Code:

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**JACKET** 

GAU SERIAL NUMBER FILING DATE CLASS **SUBCLASS** 

1761 09/697,235 10/26/00 426 2

FOREIGN PRIORITY

Document Number Date Country

**DISCLAIMER** 

TITLE

Process for optimizing milk production

MICROFICHE APPENDIX

ASSISTANT EXAMINER:

Middle: First: Last:

PRIMARY EXAMINER:

Middle: First: Last:

Bhat Nina

CLAIMS ALLOWED Total Print

Pat. No. 05455559 - 4

Issue Date: 07/23/01

Group ID: A

User ID: Etcampb

Page 2

37 1

DRAWINGS

Sheets Figures Print

12

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BLUE SLIP INFORMATION

SERIAL NUMBER CLASS SUBCLASS GAU

09/697,235 426 2 1761

INDEP. CLAIMS TOTAL CLAIMS

1 37

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BLUE SLIP (Page 1)

INTERNATIONAL CLASSIFICATION

Class SubClass

A23K 1/00;1/16;1/18

A01K 43/00

CROSS-REFERENCES

Class SubClass

426 231;635;807

424 438

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TERM EXTENSION

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FIELD OF SEARCH

<u>Class</u> <u>SubClass</u>

426 2;231;635;807

424 438

Pat. No. 05455559 - 4

Issue Date: 07/23/01

Group ID: A

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Page 3

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PCT INFO

Page 4

Pat. No. 05455559 - 4 Issue Date: 07/23/01

Group ID: A

User ID: Etcampb

CONTINUING	DATA	(Page	1)

LINE	CODE	SERIAL NUMBER	FILING DATE	<u>STATUS</u>	DOCUMENT NO.	ISSUE DATE
104	71	09/333,095	06/15/1999	01	6,183,786	/ /
105	81	08/900,414	07/25/1997	01	6,017,563	/ /

#### REFERENCES (Page 1) SERIAL NUMBER: 09/697,235 FORM 892

U.S. REFERENCE	S		•	1	,
U.S. Pat No.	Date	<u>Patentee</u>	Class	<u>SubClass</u>	· ·
*5,720,970	03/1998 02/1998	Rode et al.	424	438	+
*5,885,610 No issue date	•	Anderson	424	438	`
*5,871,773 No issue date	₹	Rode et al.	424	438	•
*5,824,355 No issue date	•	Heitritter et al.	426	459	•

#### FOREIGN REFERENCES

Country Class SubClass Foreign Doc No. Date

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

\_\_\_\_\_\_

# REFERENCES (Page 2) SERIAL NUMBER: 09/697,235

FORM 1449

## U.S. REFERENCES

SubClass U.S. Pat No. Date Patentee Class

12/1976 Ferguson et al. 4,000,318

#### FOREIGN REFERENCES

Foreign Doc No. Date Country Class SubClass

66668/74 09/1975 AUX

User ID: Etcampb

## OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

\_\_\_\_\_

### REFERENCES (Page 3) SERIAL NUMBER: 09/697,235 FORM 1449

U.S. REFERENCES  U.S. Pat No.	Date	Patentee	Class	SubClass
3,272,866	09/1966	Conner et al.	260	583
3,761,518	09/1973	Haglid	260	535
3,773,927	11/1973	Cummins	424	166
4,118,513	10/1978	Braund et al.	426	2
4,175,121	11/1979	Mantha	424	94
4,310,690	, .	Cummins	562	581
*4,335,257	6 0 <u>1</u> )/1982 06/1982	Cummins et al.	562	581
4,388,327	06/1983	Cummins	426	2
4,524,077	06/1985	Ruest et al.	514	557
4,615,891	10/1986	Nocek et al.	426	231
5,158,791	10/1992	Nocek et al.	426	231
5,167,957	12/1992	Webb, Jr. et al.	424	115
5,182,126	01/1993	Vinci et al.	426	74
5,225,230	07/1993	Seaman et al.	426	634
5,250,307	10/1993	Cummings et al.	426	72
5,391,787	02/1995	Vinci et al.	554	156
5,413,803	05/1995	Chung	426	598
5,425,963	06/1995	Lajoie	426	2
5,456,927	10/1995	Vinci et al.	426	74
5,532,008	07/1996	Sasaoka et al.	426	73

Group ID: A

User ID: Etcampb

Page 6

5,631,031 05/1997 Meade 426 2 \*<1,1>5,720,970 03/1998 Rode et al. 424 438 02/1998 \*5,763,657 06/1998 Hijiya et al. 562 561

No issue date available.

FOREIGN REFERENCES

Foreign Doc No. Date Country Class SubClass

19524054A1

01/1996 DEX

A2194437

01/1996 CAX

WO 0028835

05/2000 WOX

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

REFERENCES (Page 4) SERIAL NUMBER: 09/697,235 FORM 1449

U.S. REFERENCES

U.S. Pat No. Date Patentee Class SubClass

FOREIGN REFERENCES

Foreign Doc No. Date Country Class SubClass

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

I. Belasco ^37 Fate of Carbon 14 Labled Methionine Hydroxy Analog and Methionine in the Lactating Dairy Cow^38 ^0 Journal of Dairy Science, vol. 63, No. 5 (1980) pp. 775-784.

I. Belasco ^37 Stability of Methionine Hydroxy Analog in Rumen Fluid and Its Conversion in Vitro To Methionone by Calf Liver and Kidney^38 ^0 Journal of Dairy Science, vol. 55, No. 3, (1972) pp. 353-357.

R. Bishop et al. ^37 Effect of Continous Methionine Hydroxy Analog
Supplementation on Complete Lactations^38 ^0 Journal of Dairy Science,
vol. 55, No. 5, Abstr. P143 (1972) p. 711.

User ID: Etcampb

Chandler et al., ^37 Protein and Methionine Hydroxy Analog for

Lactating Cows^38 ^0 Journal of Dairy Science, vol. 59, No. 11, (1976)

pp. 1897-1909.

Feedstuff Staff Editor, ^37 Nogvus Enters Dairy Market With Liquid HMB^38 ^0 Feedstuffs (Jul. 29, 1996) p. 7.

- D. Fox et al. ^37 A Net Carbohydrate and Protein System for Evaluating Cattle Diets: III. Cattle Requirements and Diet Adequacy^38 ^0 Journal of Animal Science, vol. 70 (1992) pp. 3578-3796.
- D. Fox ^37 Using Computer Models In Extension to Develop More

  Profitable Feeding Systems^38 ^0 Computer Applications @n Animal

  Agriculture Workshop, (Jun. 1992) The National Dairy Database.
- D. Galligan et al. ^37 Dairy Ration Formulation and Evaluation Program for Microcomputers^38 ^0 Journal of Dairy Science, vol. 69, No. 6 (1986) pp. 1656-1664.

Galligan et al. ^37 Dairy Ration Formulation (Linear Programming)

Microcomputer Program^38 ^0 Combined Meeting of the American Dairy

Science Assoc. and the American Society of Animal Science, Lexington,

KY, (7/31-8/4/89) Journal of Dairy Science, vol. 72, Spppl. 1, Abstr.

1077 (1989) p. 445.

REFERENCES (Page 5) SERIAL NUMBER: 09/697,235 FORM 1449

U.S. REFERENCES

Group ID: A
User ID: Etcampb

### U.S. Pat No. Date Patentee

Class SubClass

FOREIGN REFERENCES

Foreign Doc No. Date Country Class SubClass

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.

L. Griel et al. ^37 Milk Production Response to feeding Methionine
Hydroxy Analog to Lactating Dairy Cows^38 ^0 Journal of Dairy Science,
vol. 51, No. 11 (1968) pp. 1866-1868.

R. Kalter et al. ^37 The Anatomy of an Exp@rt Systems Project^38 ^0 Computer Applications in Animal Agriculture Workshop, (Jun. 1992) The National Dairy Database.

J. O^3 Connor et al. ^37 A Net Carbohydrate and Protein System for Evaluating Cattle Diets: IV. Predicting Amino Acid Adequacy^38 ^0 Journal of Animal Science, vol. 71 (1993) pp. 1298-1311.

J. Patterson et al. ^37 Metabolism of DL-Methionine and Methionine
Analogs by Rumen Microorganisms^38 ^0 Journal of Dairy Sci., vol. 71,
No. 12 (1988) pp. 3292-3301.

C. Polan et al. ^37 Methionine Hydroxy Analog: Varying Levels for Lactating Cows^38 ^0 Journal of Dairy Science, vol. 53, No. 5, (May 1970) pp. 607-610.

L. Rode et al. ^37 Economics of Post-Ruminal Amino Acids in High Producing Dairy Cows^38 ^0 1997 Bioproducts & Novus International Technical Dairy Symposium Proceedings, (Feb. 27, 1997) Pheonix, Arizona, pp. 3-14.

14

--

Group ID: A
User ID: Etcampb

W. Robey et al. ^37 An Alternative Approach to Feeding Rumen
Undergradable Methionine to Dairy Cows: Optimizing Milk Production^38

^0 Feed Management (Dec. 1996).

J. Russell et al. ^37 A Net Carbohydrate and Protein System for Evaluating Cattle Diets: I. Rumual Fermentation^38 ^0 Journal of Animal Science, vol. 70 (1992) pp. 3551-3561.

C. Sniffen et al. ^37 A Net Carbohydrate and Protein System for Evaluating Cattle Diets: II. Carbohydrate and Protein Availability^38 ^0 Journal of Animal Science, vol. 70 (1992) pp. 3562-3577.

^37 Energy Barrier Breaker^13 Research Summary 1991 Edition, Megalac /9 \$\phi\$
Rumen Bypass Fat^38 ^0 Church & Dwight Co., Inc., ^62 ML1002-9104

(1991) pp. 1-16.

Brochure ^37 Megalac Plus Rumen Bypass Fat With Methionine Hydroxy

Analog For Methionine-Limited Cows^38 ^0 Church & Dwight Co., Inc.,

190 4
^32 ML1004-9007 (1994).

REFERENCES (Page 6) SERIAL NUMBER: 09/697,235 FORM 1449

U.S. REFERENCES

U.S. Pat No. <u>Date</u> <u>Patentee</u>

Class SubClass

FOREIGN REFERENCES

Foreign Doc No. Date Country Class SubClass

\_\_\_\_\_\_

OTHER REFERENCE CITATIONS (incl. Author, Title, Date, Pertinent Pages, etc.)

Brochure ^37 Megalac Plus Fills the Holes in Your Milk Protein Strategy^38 ^0 Church & Dwight Co., Inc. (1996).

(1995).

Group ID: A

User ID: Etcampb

Brochure ^37 Megalac Rumen Bypass Fat. How to feed More When Your Cows 19\$\phi\$

Can^3 t Eat More^38 ^0 Church & Dwight Co., Inc. ^32 ML1003-9502

Demonstration computer report generated by ^37 Net Carbohydrate and Protein System, ^38 ^0 Center for animal Health and Productivity, Kennett Square, PA (1995) 3 pages, ^55 Disclosed report is resident within the computer model software as an example demonstrating the computer program^3 s use and capabilities.^56

G.E. Higginbotham, J.D. Schuh, L. Kung and J.T. Huber, Palatability of Methionine Hydroxy Analog or DL-Methionine, Journa, of Dairy Science vol. 70, No. 3, 1987, pp. 630-634.

......

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Page 10